

Amendments to the Claims

The following Listing of Claims, in which deleted text appears ~~struck-through~~ and inserted text appears underlined, will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for improving the efficiency of transfer of a nucleic acid into a plant cell having an intact cell wall and contained in a seed, comprising the steps of:

a) immersing a seed containing the cell in water so as to allow the seed to absorb water;

[[a]] b) placing [[a]] the seed containing the cell and the nucleic acid in a container and depressurizing the container wherein the pressure in the container is reduced by about 0.096 MPa from the atmospheric pressure;

[[b]] c) subsequently placing the seed containing the cell and the nucleic acid under conditions to induce electroporation; and

[[c]] d) transferring the nucleic acid into the plant cell using electroporation.

2-5 (Previously canceled)

6. (Currently amended) The method according to claim 1, wherein step [[c]] d) comprises applying a voltage pulse of 10 V/cm to 200 V/cm to the cell and the nucleic acid in at least two directions.

7-9. (Previously canceled).

10. (Previously presented) The method according to claim 1, wherein the plant cell is from a monocotyledonous plant.

11. (Previously presented) The method according to claim 10, wherein the monocotyledonous plant is a plant of the family *Gramineae*.

12. (Previously presented) The method according to claim 11, wherein the plant of the family *Gramineae* is wheat (*Triticum aestivum* L.).

13. (Previously presented) The method according to claim 11, wherein the plant of the family *Gramineae* is rice (*Oryza sativa* L.).

14. (Previously presented) The method according to claim 11, wherein the plant of the family *Gramineae* is maize (*Zea mays* L.).

15. (Previously presented) The method according to claim 1, wherein the plant cell is from a dicotyledonous plant.
16. (Previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Cruciferae*.
17. (Previously presented) The method according to claim 16, wherein the plant of the family *Cruciferae* is Chinese cabbage (*Brassica rapa* L.).
18. (Previously presented) The method according to claim 16, wherein the plant of the family *Cruciferae* is rape (*Brassica napus* L.).
19. (Previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Leguminosae*.
20. (Previously presented) The method according to claim 19, wherein the plant of the family *Leguminosae* is soybean (*Glycine max* Merr).
21. (Previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Solanaceae*.
22. (Previously presented) The method according to claim 21, wherein the plant of the family *Solanaceae* is tomato (*Lycopersicum esculentum* Mill).
23. (Previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Cucurbitaceae*.
24. (Previously presented) The method according to claim 23, wherein the plant of the family *Cucurbitaceae* is Japanese cantaloupe (*Cucumis melo* L. ).
25. (Previously presented) The method according to claim 15, wherein the dicotyledonous plant is a plant of the family *Convolvulaceae*.
26. (Previously presented) The method according to claim 25, wherein the plant of the family *Convolvulaceae* is morning glory (*Pharbitis nil* Choisy).

27. (Currently amended) A method for improving the efficiency of introducing a nucleic acid into a cell of a plant, wherein the cell has an intact cell wall, comprising the steps of:

- a) immersing a seed containing the cell in water so as to allow the seed to absorb water;
- [[a)] b) placing a seed containing the cell and the nucleic acid in a container and depressurizing the container wherein the pressure in the container is reduced by about 0.096 MPa from the atmospheric pressure;
- [[b)] c) subsequently placing the seed containing the cell and the nucleic acid under conditions to induce electroporation and introducing the nucleic acid into the cell using electroporation; and
- [[c)] d) differentiating, growing, and/or multiplying the cell.

28 - 29. (Previously canceled)

30. (Previously presented) The method according to claim 27, wherein the seed is a monocotyledonous plant seed.

31. (Previously presented) The method according to claim 30, wherein the monocotyledonous plant seed is a seed of the family *Gramineae*.

32. (Previously presented) The method according to claim 31, wherein the seed of the family *Gramineae* is a wheat (*Triticum aestivum* L.) seed.

33. (Previously presented) The method according to claim 31, wherein the seed of the family *Gramineae* is a rice (*Oryza sativa* L.) seed.

34. (Previously presented) The method according to claim 31, wherein the seed of the family *Gramineae* is a maize (*Zea mays* L.) seed.

35. (Previously presented) The method according to claim 27, wherein the seed is a dicotyledonous plant seed.

36. (Previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Cruciferae*.

37. (Previously presented) The method according to claim 36, wherein the seed of the family *Cruciferae* is a Chinese cabbage (*Brassica rapa* L.) seed.

38. (Previously presented) The method according to claim 36, wherein the seed of the family *Cruciferae* is a rape (*Brassica napus* L.) seed.

39. (Previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Leguminosae*.
40. (Previously presented) The method according to claim 39, wherein the seed of the family *Leguminosae* is a soybean (*Glycine max* Merr) seed.
41. (Previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Solanaceae*.
42. (Previously presented) The method according to claim 41, wherein the seed of the family *Solanaceae* is a tomato (*Lycopersicum esculentum* Mill) seed.
43. (Previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Cucurbitaceae*.
44. (Previously presented) The method according to claim 43, wherein the seed of the family *Cucurbitaceae* is a Japanese cantaloupe (*Cucumis melo* L.) seed.
45. (Previously presented) The method according to claim 35, wherein the dicotyledonous plant seed is a seed of the family *Convolvulaceae*.
46. (Previously presented) The method according to claim 45, wherein the seed of the family *Convolvulaceae* is a morning glory (*Pharbitis nil* Choisy) seed.
47. (Previously presented) A plant, produced by a method according to any one of claims 27 or 30-46.
48. (Previously presented) The plant according to claim 47, which does not contain a somaclonal variation.
49. – 70. (Previously canceled)
71. (Previously presented) A plant, produced by a method according to claim 27.